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DATE: September 21, 1995

TO: Distribution

FROM: Glenn Goldberg, DOE-RL
Jamie Zeisloft, DOE-RL

Telephone: 509-376-9552
509-372-0188

cc:		
	K. A. Gano	H6-02
	L. C. Goodey	B1-42
	R. P. Henckel	H4-92
	P. S. Kube	A5-15
	K. M. Leonard	H6-02
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SUBJECT: North Slope, Horseshoe Landfill and Horn Rapids Landfill Revegetation Plans

The purpose of the meeting scheduled for Thursday, September 28, 1995, from 10:00 a.m. to noon in Conference Room 108, Atrium Building, 639 Cullum, Richland, Washington, is to respond to comments on the North Slope, Horseshoe Landfill, and Horn Rapids Landfill revegetation plans. At this meeting, DOE will also present its chosen alternatives and answer any questions raised regarding the selected courses of action. Attached are the responses to comments on the three revegetation plans.

Upon review of the various options for the revegetation of the Horn Rapids Landfill DOE-RL has selected Option 2, planting SCS foundation seed utilizing the imprinting technique, for the following reasons: (1) DOE-RL meets the requirements of the ROD; (2) HRL is not a suitable site due to unknown land use; (3) it is not technically feasible to do a full restoration effort since this is a landfill; and (4) this option allows for the timely completion of the applicable milestone.

For restoring the North Slope burn area, DOE-RL has selected the option to collect sagebrush seedlings from road cuts and planting them in the burn area. It has been determined that enough seedlings are available to provide an effective seed source for the burn area.

For the Horseshoe Landfill, DOE-RL has selected the option where bunchgrass will be gathered from road cuts and transplanted on the landfill. In addition there are other sites identified by comments (#4) that are being assessed for revegetation. Additional information is being gathered.

Should you have any questions as to the purpose of this meeting, please give me a call on (509) 376-9552.

Glenn

ATTACHMENT: Response to Comments on Revegetation Plans

North Slope

Comments from USF&WLS and WSF&WLS both insisted on restoring the plan to plant sagebrush in the burn areas (i.e., offsite restoration) of the North Slope. In reinstating this option into the plan, there were two alternatives that were evaluated.

- One option would be to contract a nursery to grow 5,000 sagebrush tubelings (the original number planned) during the spring of 1996 to be ready for planting in the fall of 1996. This would require that a contract be let and funding committed in FY96 for planting which would occur in October 1996.

- Another option would be to collect sagebrush seedlings from road cuts in the area for transplanting to the burned areas on the North Slope. With the very wet year we have just had, the plants are available in many areas. The advantage of this option is that it could be done during the winter of 95-96. The availability of native seedling plants has been determined to be adequate in order to provide a seed source for the burn areas.

HORSESHOE LANDFILL ON ALE

Comments on this plan included:

1. An expansion of the purpose of the revegetation.

   The purpose of this revegetation effort will be restated to improve clarity with the following: The purpose of this revegetation/restoration effort will be to restore the area of disturbance to a plant community dominated by native bunchgrasses with an overstory of sagebrush. Prior to cleanup, this site contained few shrubs and was mostly dominated by cheatgrass. The proposed effort will improve the habitat for animals at this site and restore the vegetation to a better condition than existed prior to cleanup activities. Reestablishing sagebrush at this site will provide a seed source that will allow future natural reseeding to occur and expand the size of the sagebrush community on ALE.

2. Reviewers objected to taking bunchgrass plants from the native community to be transplanted on the Horseshoe Landfill.

   This issue was discussed with Larry Cadwell (current PNL manager of ALE). He suggested that plants be taken from road cuts. A field investigation on September 13, 1995, found that ample bunchgrasses are available along the 1200 foot road and other unpaved roads on ALE for transplanting. The advantages of this approach are that a representative collection of bunchgrass species could be obtained at the same elevation as the landfill and there would be no risk of importing weed species that don't occur on ALE. Plants living in the roadway are already at risk and removing a small proportion of them would not likely impact future studies on native grasslands. Plants are often destroyed in the roadways by vehicle use and grading. For example, the powerline road that runs from highway 240 to ALE HQ and on to the top of the hill was graded this summer to improve access for maintenance and provide a fire break. Also, the fire

fighting policy for ALE is to fight the fires only on the existing roads by grading and use of water trucks.

3. A more developed monitoring plan and measure of success was requested.

   The monitoring plan will be amended to include the following (to begin by rewording the last sentence): Success will be measured as a improvement of the parameters measured and compared with the adjacent native community adjoining the southern boundary of the site. Recognizing that succession to a seral community in the desert shrub-steppe can take many years, success of revegetation will be measured using an index of abundance of native species and canopy coverage. Species composition and canopy cover will be measured in the revegetated plot and compared with the adjoining native community. Since the original vegetation on this plot prior to cleanup was lacking bunchgrasses and a healthy shrub component, successful revegetation will be determined by the reestablishment of these two major components.

4. One comment suggested revegetation be conducted at three other small sites in the vicinity of the Nike site.

   During the field investigation on September 13, 1995, these three sites were located and observed for revegetation value. These sites are small and the disturbed areas are approximately 20 ft. X 30 ft., 12 ft. X 30 ft., and 12 ft. X 75 ft. The first site is bare and surrounded by native vegetation. The second site is mostly bare and is surrounded by cheatgrass on one side and bunchgrass on the other. The third site is the largest and is surrounded by cheatgrass and was probably cheatgrass to begin with. DOE-RL is currently reviewing the cost and viability of these three small sites. Information on what revegetation actions (if any) will be available at the meeting.

HORN RAPIDS LANDFILL OPTIONS AND COMMENTS THAT WERE CONSIDERED

Option 1. Trustees propose that EPA and Ecology move the TPA milestone M-16-05A-T3 (Complete 1100 Area Site Restoration [e.g., revegetation]) to a date that is reasonable for revegetating with native seed or plant species. Stabilize the site by December 31, 1995, with a sterile grass to establish a good grass cover. This effort will most likely take 3-5 years and will include raking the weeds prior to planting, and using selective herbicides during the establishment period of the grass. When the grass cover is well established, imprint native grass seeds (shrubs are not technically feasible, given the asbestos cap cannot support deep rooted vegetation) over the sterile grass. Monitor for 3-5 years to ensure that the revegetation effort is successful. Determine the success criteria in coordination with co-trustees.

Option 2. Use SCS foundation seed for replanting HRL, utilizing the imprinting technique as a demonstration project. DOE maintains that the milestone M-16-05A-T3 must be met. Planting should be planned on for late October or early November 1995 (depending on the weather). There is acknowledgment of the importance of using native plant seed sources and plant stocks for restoration and revegetation

purposes. However, as of this date, there is no locally derived seed source (non-SCS) available. The availability of locally derived seed sources could be at least one to two years away.

Additionally, it could be argued that SCS foundation seed is considered regionally derived seed. What that means is that some species of seed are collected from the intermountain area. The intermountain area consists of Northern Washington -- Spokane area, Central and Eastern Oregon, Southern Idaho, all of Nevada and Utah. There are some varieties of SCS foundation seed that is considered native to the area (intermountain region), that have been selected for their particular characteristics (e.g., color, adaptability, growth rate).

The proposal for using SCS foundation seed should be considered for the following reasons: (1) Sandberg's bluegrass (Poa sandbergii) is what's present on the Hanford Site. What's available through the commercial seed growers is being called Poa secunda (aka. Poa Sandbergii) the variety being canbar. This variety has been collected over the intermountain region but not at any particular site. It was increased and released through WSU Plant Material Center in Pullman. When the Plant Material Center releases a seed, it has usually been monitored for it's genetic purity and can be considered grown in the area; (2) Indian Rice Grass is an SCS variety, nezpar. It was considered to be the only strong variety and is considered a Washington released seed (due to "ar" ending). This seed can be considered narrow in it's diversity because of the reasons it was picked; (3) Bottlebrush squirreltail is an SCS release that has been collected in the intermountain region; (4) Bluebunch Wheatgrass is an SCS release, the variety being secar. Secar is the most commonly collected. This particular cultivar is listed as being collected in the Lewiston, Idaho area and released by the Plant Material Center in Pullman; and (5) Thickspike wheatgrass is an SCS variety, Critana. It is considered a Montana release and was collected in Havre, Montana. This seed should be eliminated from consideration as it is clearly a non-native species.

Option 3. Revegetate to determine (a) whether imprinting is effective, and (b) whether locally derived native seeds are more successful than nonlocal native seeds. Seed in fall 1996 with four treatments: local seeds/imprinting, local seeds/drilling, nonlocal seeds/imprinting, nonlocal seeds/drilling. This option would require multi-year monitoring.

Note: There is no native seed available. The seed that is available is committed for another project and not available.

Comments

1. Clarify the purpose of the revegetation effort for the Horn Rapids Landfill.

The purpose of the revegetation of the cap is to meet the kegal requirements outlined in the Record of Decision, which calls for the revegetation of the cap with dry land grasses. An additional goal of the revegetation is to control erosion so that minimal maintenance must be performed in the future.

2. A more developed monitoring plan and measure of success was requested.

The monitoring plan will be amended to include the following (to begin by rewording the last sentence): Success will be measured as a steady improvement of the parameters measured and compared with the adjacent community. Recognizing that succession to a seral community in the desert shrub-steppe can take many years, success of revegetation will be measured using an index of abundance of native species and canopy coverage. Species composition and canopy cover will be measured in the revegetated plot and compared with the adjoining community. Since the original vegetation on this plot prior to cleanup was lacking bunchgrasses, the revegetation effort will be considered successful if the area is stabilized to prevent erosion and is dominated by a recovering native bunchgrass community.